

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A respirator comprising a respirator facepiece,

a first sealing means configured to form a seal on the face of a user surrounding an area of the user's face comprising the eyes, mouth and nose so as to define a first cavity bounded by the first sealing means, the respirator facepiece and the said area of the user's face,

a second sealing means suitable for forming a seal on the face of the user that forms an outer seal around the first sealing means so as to define a second cavity, the second cavity being formed between the second sealing means, the first sealing means, and a portion of the face of the user and optionally the respirator facepiece, ~~wherein the first and second cavities define separate, non-communicating cavities,~~

a respirator air inlet for conducting inhaling air to the first cavity,

a respirator air outlet for conducting exhaled air from the first cavity, and

an air pressure supply means suitable for supplying ~~pressurised~~ pressurized air to the second cavity ~~in order to maintain a positive pressure in the second cavity,~~

wherein the first and second sealing means are adapted for increasing sealing contact under the influence of the air pressure supply means;

whereby in normal operation and wherein in use, the first and second cavities define separate, non-communicating cavities when positioned against a user's face, air is inhaled

~~and exhaled~~ under negative pressure solely through the first cavity, air is exhaled solely through the first cavity, and a positive pressure is maintained in the second cavity, ~~and so that~~ the first and second sealing means are urged into a more positive engagement with the face of the user and substantially no air pressure differential exists between the ambient atmosphere and the second cavity which will allow ambient air to enter the second cavity.

2. (original) A respirator according to claim 1 further comprising at least one eyepiece and a means for directing inhaling air over the at least one eyepiece.

3. (currently amended) A respirator according to claim 2 ~~further~~ wherein the means for directing inhaling air over the at least one eyepiece is capable of diverting some of the inhaling air directly to the oronasal region of the user.

4. (previously presented) A respirator according to claim 2 further comprising exhaust deflection means capable of preventing exhaled air from contacting the at least one eyepiece.

5. (original) A respirator according to claim 4 wherein the exhaust deflection means comprises a third sealing means that, in use, engages with the face of the user so as to form ocular and oronasal cavities, the third sealing means being provided with means for permitting gaseous flow from the oronasal cavity to the ocular cavity.

6. (previously presented) A respirator according to claim 1 further comprising a valve assembly comprising a valve body having a valve assembly outlet and a valve assembly inlet, and a valve cavity therebetween, a valve mechanism for permitting gaseous flow through the valve assembly inlet into the valve cavity and to the valve assembly outlet, a continuous purge outlet means connectable to an air pressure supply means, an air deflection means spatially arranged in the valve cavity relative to the valve mechanism and the purge outlet means such that, on connection and activation of a suitable air pressure supply means, air is emitted from the purge outlet means and is incident on the air deflection means such that a curtain of air may be substantially maintained above the valve mechanism.

7. (currently amended) A respirator according to claim 1 wherein the respirator air inlet is, in use, in gaseous communication with the first cavity, thus forming a first gaseous pathway within the respirator, a second air inlet is in gaseous communication with the air pressure supply means which is capable, in use, of providing gas to the second cavity, thus forming a second gaseous pathway, wherein the ~~first~~ respirator and second air ~~inlets~~ inlet are located in a common filter connection means, and the filter connection means is connectable to a suitably adapted filter such that in use the first and second gaseous pathways are mutually isolated so that inhalation by the user does not substantially affect the pressure in the second gaseous pathway.

8. (currently amended) A sealing piece for attachment to a respirator wherein air is inhaled under negative pressure, the sealing piece comprising first, second, and third

portions, each of the first and second portions comprising a substantially compliant material and having a respective sealing surface suitable for engagement with the face of the user so as to define a substantially sealed cavity bounded by the sealing piece and the face of the user, the first and second portions being mutually connected by and contacting the third portion being suitable for attachment to the surface of a respirator and having attachment lugs for the attachment of straps for fitting the respirator to the head of the user, the sealing piece further comprising a gas inlet for allowing, in use, the supply of ~~pressurised~~ pressurized gas to the cavity such that a positive pressure is maintained in the cavity, and wherein the first and second portions are ~~so~~-shaped having end portions that are inwardly curved toward one another such that, in use, the application of a positive pressure in the cavity ~~does not cause the seals to be broken~~ urges the first and second sealing means into a more positive engagement with the face of the user.

9. (canceled)

10. (currently amended) A sealing piece according to claim 8 wherein the first and second portions are locally J or U shaped in section.

11. (currently amended) A sealing piece according to claim 8 wherein ~~at least one of the first and the second portions~~ portion comprises a reverse reflex seal.

12. (canceled)

13. (canceled)

14. (canceled)

15. (new) A respirator according to claim 1, wherein the first and second sealing means are locally J or U shaped sections.

16. (new) A respirator according to claim 1, wherein the second sealing means comprises a reverse reflex seal.